



Actuator for L&S Slipper Valves up to DN50 AC 230 V

SQK349.00

-
- Three-position control
 - Reversible
 - Nominal angular rotation 90°
 - Can be equipped with one auxiliary switch
 - For the motorization of Landis & Staefa slipper valves up to DN50
 - For direct assembly with no need for an assembly kit
 - Selector for «AUTO» and «MAN» operation
 - With manual adjuster and position indicator

Use

In heating, ventilating and air conditioning plants for the motorization of three-port and four-port slipper valves (mixing valves) of the Landis & Staefa ranges VB... and VC... up to DN50.

Functions

When the actuator receives a control signal from the respective controller, it produces a rotational movement which is transferred to the valve via the coupling mechanism.

Control signal: Y1 = anticlockwise rotation
0 = no rotation, the respective position is maintained
Y2 = clockwise rotation

The direction of rotation resulting from a certain control signal can be reversed, if required, depending on the hydraulic circuit used. For details, refer to «Commissioning notes» and to the instructions given under the cover of the actuator.

Type summary

Name	Type reference
Actuator	SQK349.00
Auxiliary switch (not fitted)	ASC9.7

Ordering

When ordering, please give name and type reference, e.g. **actuator SQK349.00** and **auxiliary switch ASC9.7**.

Actuator and auxiliary switch must be ordered as separate items. They are supplied together but packed separately.

The actuators are supplied in collective packings of 25 pieces which also contain the installation instructions.

Equipment combinations

Slipper (mixing valves)

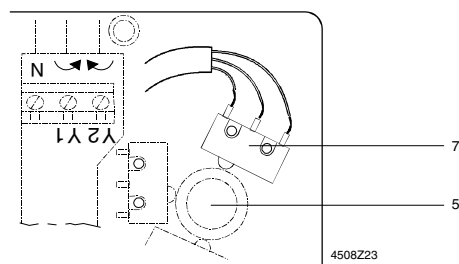
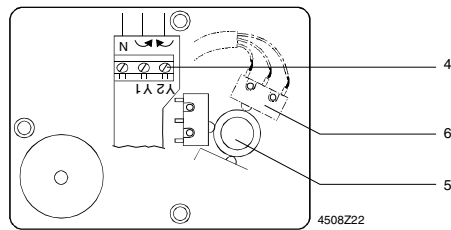
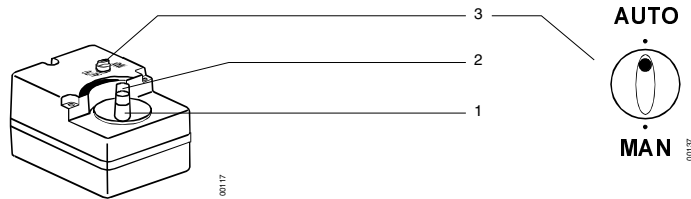
The following types of Landis & Staefa slipper valves can be directly motorized by the SQK349.00:

	Type reference	Nominal size	Nominal pressure	Data sheet
Three-port slipper valves	VBI31... series 02	DN20...40	PN10	4232
	VBG31... series 02	DN20...40	PN10	4233
	VPF21... series 02	DN40 und 50	PN6	4241
Four-port slipper valve	VCI31... series 02	DN20...40	PN10	4252

Mechanical design

Maintenance-free electric actuator with reversible synchronous motor. The angular rotation of 90° is electrically limited by two limit switches.

A manual setting knob is used for setting the required valve position manually. Manual operation is preselected with the selector having the positions «AUTO» and «MAN». After manual operation, the selector must be reset to «AUTO».



- 1 Manual setting knob
- 2 Position indicator, can be changed manually, depending on the required direction of rotation.
- 3 Selector for automation, or manual operation
- 4 Connecting terminals
- 5 Coupling and cam shaft
- 6 Space for auxiliary switch
- 7 Auxiliary switch ASC9.7.
For on/off or changeover operation. The switching point is adjustable. Factory-wired with a three-wire cable of 1.5m.

Engineering notes

For three-port and four-port slipper valves (mixing valves), refer to data sheets 4200 ... 4299.

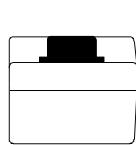
The permissible ambient temperatures given under «Technical data» must be observed.

If auxiliary functions are required, the actuator must be equipped with an auxiliary switch. In the case, its switching points must be entered in the plant's documentation.

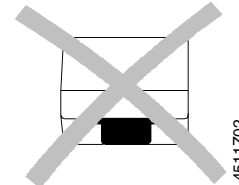
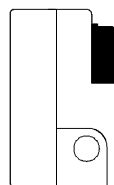
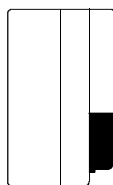
Fitting notes

Actuator positions

The permissible position of the slipper valve must be observed. Details are given in the respective data sheets of the slipper valves.



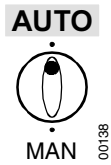
Permitted



Not permitted

4511Z02

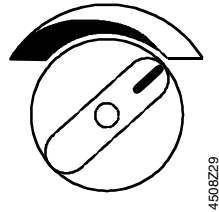
When commissioning the plant, check the wiring and carry out a functional test. For automatic operation, the selector must be set «AUTO».



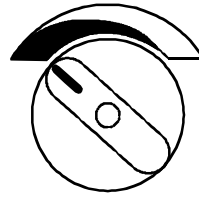
AUTO = automatic operation



MAN = manual operation



Manual setting «FULLY CLOSED» *)
= no supply of heat

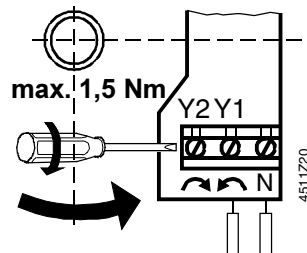


Manual setting «FULLY OPEN»
= maximum supply of heat

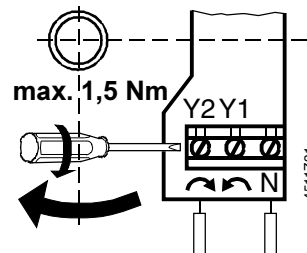
*) If the hydraulic circuit is reverse, the removable scale for the position indication must be turned.

Direction of rotation

The direction of rotation of the actuator or the slipper valve is determined by the – position of the slipper valve (hydraulic circuit)



Control signal supplied to terminal Y1
= anticlockwise rotation *)



Control signal supplied to terminal Y2
= clockwise rotation

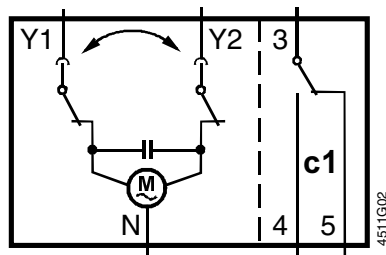
*) The direction of rotation given above is the «as supplied» condition of actuator and three-port slipper valve (mixing valve) for boiler flow from left

The wiring connecting to terminals Y1 and Y2 must be interchanged if the direction of rotation is to be reversed. If an auxiliary switch is fitted, this aspect must also be taken into consideration when making the electrical connections.

Technical data

Actuator	Operating voltage	AC 230 V \pm 15 %
	Frequency	50 Hz, 60 Hz
	Mode of control	3-Punkt
	Power consumption	3 VA
	Running time	approx. 135 s for 90° rotation
	Angular rotation	90° \pm 3° (non-adjustable)
	Starting torque	10 Nm
	Nominal torque	5 Nm
	Perm. Ambient temperatures	
	Operation	- 15 ... + 50°C
	Transport and storage	- 30 ... + 65°C
	Perm. Ambient humidity	class D IEC 721 / DIN 40040
	Protection standard of housing	IP42 IEC 529 / DIN 40050
	Insulation class	II IEC 730 / VDE 0631
	Cable entry glands	Pg11 (2x)
Weight	0.5 kg	
Auxiliary switch	Switching capacity of ASC9.7	AC 250 V, 6 A (res.), 2 A (ind.)

Internal diagram

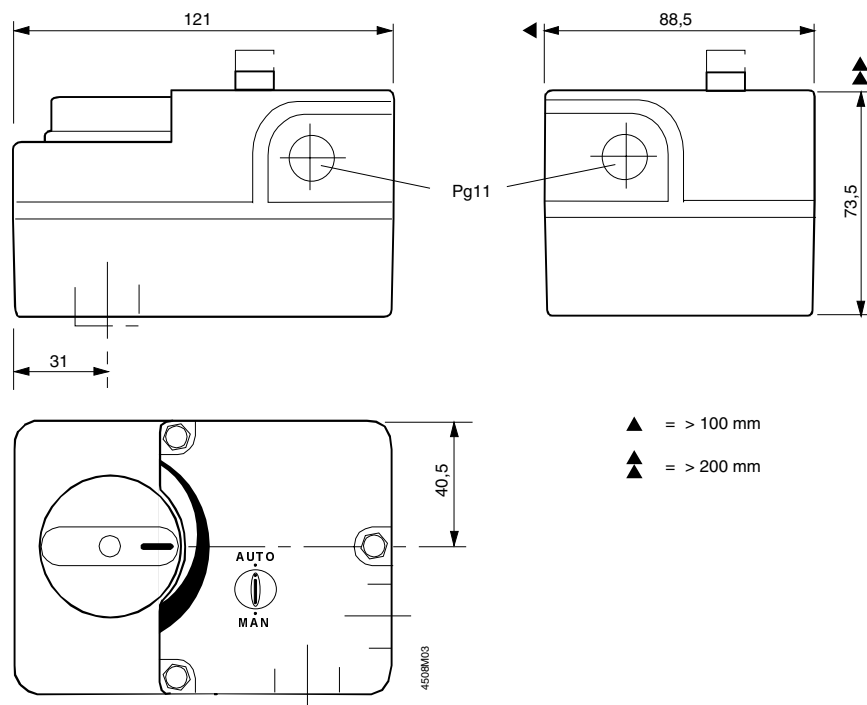


C1 = auxiliary switch ASC9.7

SQK349.00 (AC 230 V)

Dimensions

Dimensions in mm



Total height of motorized valve:

- = connection dimension of slipper valve
- + connection dimension of actuator
- + min. clearance to the ceiling or wall for installation, electrical connections and operation.

Also refer to data sheets 4200...4299 covering the slipper valves, in section 4 of the catalog.